between the weight of the material to be weighed and the electromagnetically generated compensation force. The compensation current generates a measurable voltage on measuring resistor **15** which voltage is supplied to analogue-to-digital converter **17**. The digitized result is assumed by digital signal processing electronics **18** and digitally displayed in display **19**.

Balances of this type are generally known both as regards their construction and their operation, so that a detailed description can be eliminated.

Several memory areas are present within the framework of digital signal processing electronics **18** of which memory areas **27**, **28** and **29** are shown by way of example in FIG. **2**. Of the various operating keys **21** to **26** only the two keys **24**, **25** are shown in FIG. **2** for the sake of clarity; the other keys are connected in the same manner to digital signal processing electronics **18**. The cooperation of the various keys and memory areas during loading is explained in the following.

The loading takes place in the following steps:

1. The empty container is placed on the balance scale.

2. Tare key **21** is actuated, wherewith display **19** is set to zero.

3. The first component is located to the weight indicated in the formulation and the loading concluded by actuating key **24**. This stores the actual value displayed in balance display **19** as the correct value corresponding to the theoretical value in memory area **29**. Depending on the makeup of the formulation display **19** is set back at the same time thereby to 0.0. If the theoretical weights are individually recited in the formulation or if the sum of the components is indicated in the formulation display **19** remains unchanged.

4. Then the second component is loaded in and the conclusion is again actuated by key **24**. The correct value of the second component is also stored in memory area **29**.

5. Then the third and all further components are loaded in a similar manner. If no loading error occurs for any of these components the formulation is concluded. The values stored in memory area **29** are cancelled, when an empty container is subsequently put on the scale, by means of the actuation of tare key **21**.

If in the process just described e.g. too much is inadvertently loaded in the case of the third component, e.g. 125.4 instead of 125.0 g, the operator actuates key **25** for decreasing. As a result thereof on the one hand the current actual value of 125.4 g is taken into memory area **27** and on the other hand the displayed value in display **19** is decreased by one numerical step to 125.3. Display **19** is brought to value 125.0 by pressing key **25** three times more and this value is confirmed as the correct value by actuating key **24**. Signal processing circuitry **18** can calculate the percentage deviation (+0.32% in the example) from the difference of the actual value stored in memory area **27** from the theoretical value stored in memory area **29** (0.4 g in the example) and divide the net balance display by the factor 1.032 for the following components so that the following components are automatically loaded by 0.32% too much relative to the formulation so that the relative mixing proportions of the third and of the following components agree. (In order to display this change of the sensitivity of the balance, gram symbol **30** goes out in display **19** and/or additional symbol **27** is triggered and displayed.) After the loading of the last component the correction process is started by actuating key **23** in which the components not yet overloaded in the correct proportion must be subsequently loaded thereon. In the given example of the incorrect loading of the third component over that of the two first components. The balance calculates thereby the missing amount for the overloading of 0.32% and displays it in the display as a negative value. (Shown as a lacking 0.6 g in FIG. **3** as example for the second component.) The operator must then load in up to the display of 0.0 g and confirm this by actuating key **24**. The balance then shows the number of the next component and the lacking amount and confirms the conclusion of the correction e.g. by the displaying of "OK" after the lost component to be subsequently loaded.

Key **26** serves to increment the value in display **19** and serves especially to be able to cancel an inadverant dropping below the correct theoretical value in the display by too frequent an actuation of decreasing key **25**. Key **22** can be engaged, depending on the application, and control e.g. a printer.

The mathematical details for the program run in signal processing electronics **18** are not explained in the above as then can be readily worked out by any programming expert.

We claim:

1. An electronic balance for weighing out quantities of ingredients based upon a recipe of ingredients, comprising;

an ingredient weighing container positioned on said balance;

electronic storage memory for the weight of a first ingredient in said weighing container;

electronic storage memory for the weight of a second ingredient in said weighing container;

electronic means to subtract the weight of the second ingredient called for in said recipe from the weight of the second ingredient in said weighing container;

means to determine the ratio of the weights of said ingredients called for in said recipe;

display means to show the amount of said first ingredient need to establish said ratio.

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